

VÄDERSTAD

Carrier Drill





Two machines in one!

Väderstad Carrier Drill is two machines in one! With Carrier Drill, all soil preparation and seed drilling can be carried out using only one machine. Few other systems on the market can match this in terms of capital binding and versatility.

On small or medium-sized farms, Väderstad Carrier Drill can carry out all the soil cultivation operations and drilling needed to establish a new crop. Carrier Drill is equally suitable for shallow tillage systems and for systems using the plough.

Shallow tillage on level fields

In a shallow tillage system, one or two passes are made with Carrier Drill directly after the combine harvester to initiate straw decomposition and to encourage volunteer seeds and weeds to germinate. Once germinated, these are treated with e.g. glyphosate or with another cultivation. All that remains is to fill the seed hopper and complete drilling in the next pass.

Crossboard increases flexibility

Carrier Drill equipped with Crossboard does an incredible job directly after the plough. Cross-

board efficiently crushes plough furrows and levels the soil surface ahead of the intensive cultivating action of the discs. Crossboard makes Carrier Drill an even more flexible implement for soil cultivation and drilling. During work in stubble, Crossboard can be folded up completely.



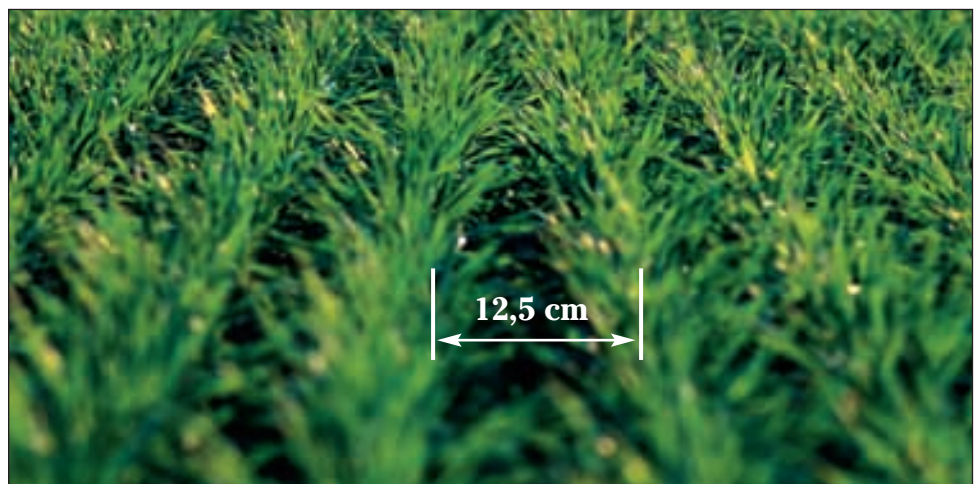


"I drill all my crops with Carrier Drill. When buying this equipment I looked for speed and robustness. After three years of use, I haven't been disappointed. With my 3 m Carrier Drill, I go faster than with a combine rotary harrow of 4 m, and I work well in wet conditions."

Pascal Garcin, France, 202 ha.

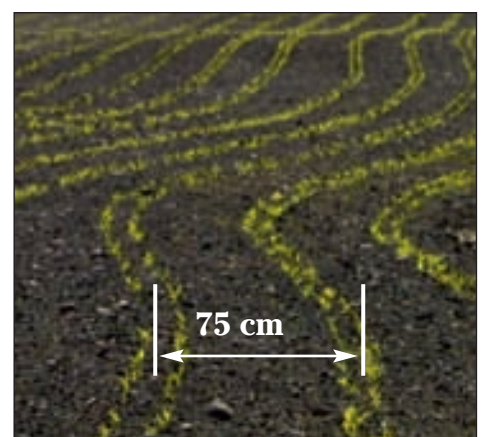
Uniform emergence

The seeds are spread in bands in the wake of each disc and covered with soil, then consolidated by the roller. The proven ability of Väderstad Carrier to operate to a shallow, precise working depth creates excellent conditions for uniform emergence. The seed metering system, which is the same as that on Väderstad Rapid, is well tried and tested.



Drills all sizes of seed

A farmer in Czech has tried drilling maize using Carrier Drill, with good results. The maize is direct-drilled in double rows. This farmer runs a 120 hectare farm and claims that drilling maize with Carrier Drill is a very good and economical alternative for smaller farms (50 - 150 ha).





Great savings

Regardless of the cropping system used, Carrier Drill saves time through cultivating and drilling at high speed.

Since Carrier Drill is capable of both soil cultivation and drilling, it can replace several machines on the farm. This decreases bound capital and consumption of working time and diesel. The diagrams compare the time and diesel consumption in a commonly used machinery system with that in a system with Carrier Drill.

Conditions

Crops: Cereals and oilseeds

Area: 200 ha

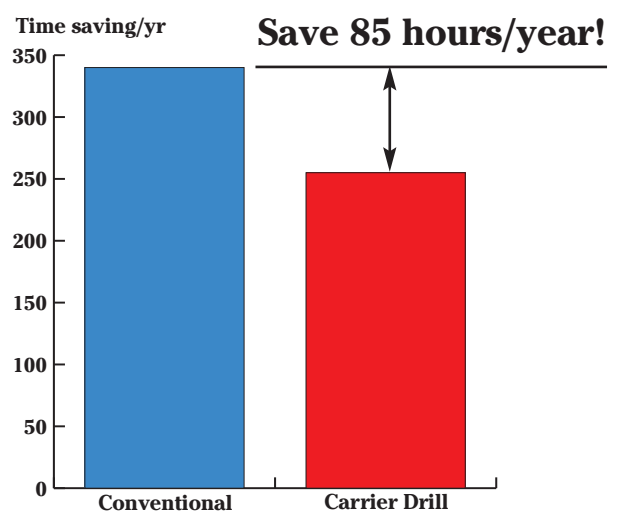
Conventional system

- 135 hp tractor
- Ploughing with 5-furrow plough
- 4 m rotary harrow/seed drill combination
- Rolling

Carrier Drill system

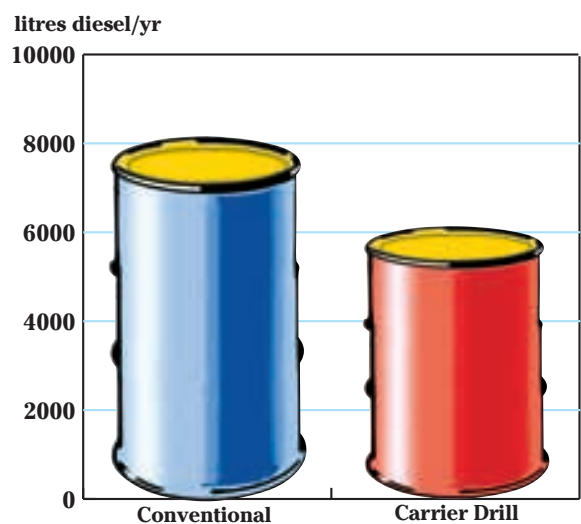
- 135 hp tractor
- Soil preparation with Carrier Drill (or cultivator)
- Spraying
- Drilling with Carrier Drill
- Rolling

According to our calculations, the Carrier Drill system leads to annual savings of 85 working hours and 2000 litres of diesel.



Carrier Drill saves 25% of working time
Conventional 340 hours

Save 2000 litres of diesel/year!



We assumed that a 135 hp tractor consumes 24 litres of diesel per hour when working at full capacity. The system with Carrier Drill means a saving of over 2000 litres of diesel per year (85 hr x 24 l/hr=2040 litres).



Built for toughness

No chain is stronger than its weakest link and quality is therefore a key concept at Väderstad. Material and constructions must withstand tough work on thousands of hectares.

Our own intense testing during the development phase ruthlessly uncovers any existing weaknesses so that they can be rectified, resulting in a machine that endures for many years. Carrier Drill consists of few moving parts, which means that maintenance is minimal. Rol-

ler and discs are both well-known and have been extensively tested for years on Väderstad Carrier.



Tough testing

To ensure long life, our machines are tested under extreme conditions in parallel with development work. In addition to field testing, our machines are driven lap after lap around a gravel pit and a stone quarry, where they are exposed to more ruthless treatment than they would ever experience in normal conditions on the farm. That lays the foundations for long life and thus good economics overall.



Durable rubber suspension

Each disc is mounted in rubber suspension. That creates a stable ride and gives the discs an impressively long life, since impacts and vibrations are absorbed during work on stony soil.



Hardwearing discs

Carrier Drill is fitted with hardened conical discs manufactured from quality Swedish steel for maximum wear and longevity. The conical shape of the discs means that the angle of approach is always the same regardless of wear, so the results are always equally good regardless of whether the discs are new or old. The disc bearings are greaseless, which minimises the maintenance requirement.



Cultivation and drilling in a single pass

With Carrier Drill, crop establishment is markedly more efficient. Cultivation and drilling take place in one and the same pass.

Used correctly, Carrier Drill is a machine that saves time and money through its dual function.

Drawbar + Crossboard optional

The Crossboard toolbar (which is attached to the drawbar) carries out initial cultivation and levelling of the soil. The Crossboard tines are interlinked by a stabiliser bar with a breaking point of over 1100 N/mm². This stabiliser bar gives a very thorough levelling effect on the coarsest plough furrows. On light soils or where moderate levelling is required, the bar can be removed.

Intensive mixing

Two rows of conical and notched discs with a

diameter of 450 mm slice and mix the soil together with harvest trash down to 10 cm depth. The mixing is intensive and the remorseless discs do a phenomenal job by gnawing, grinding and crushing the soil. This decreases the need for further passes and results in a fine tilth with a good moisture retention barrier.

Spacious hopper

The seed hopper has a capacity of 1100 litres and is mounted above the discs. Metering uses the same tried and tested system as on Rapid. A tube and seed nozzle discharge behind every disc and broadcast the seed. The soil flow from the discs then covers the seed.

Thorough soil consolidation

The soil is reconsolidated with a rubber or steel roller with a diameter of 600 mm. The rubber roller is preferable on light soils to decrease the risk of soil drag, while the steel roller works more ag-

Spacious seed hopper, 1100 litres

Optional Control-Station Bio



Optional drawbar



450 mm discs in V-55 steel

Optional Cross-board in combination with drawbar

4 models in 4 steps

Carrier Drill is available in four different levels of equipment:

1. Without electronics + mechanical area meter
2. Without electronics + mechanical area meter + following harrow
3. With following harrow + Control-Station Bio
4. With following harrow + Control-Station Bio + bout markers

gressively and is recommended on heavier soil. The roller has adjustable scrapers that keep it free from soil and plant trash.

Control-Station Bio provides information and control

Control-Station Bio allows many functions to be set from the cab and the seed drill operator receives all information in a clear and accessible way. Bout marking, tramlining, speed and area covered are measured in this way and warnings are given e.g. when the seed level is low.





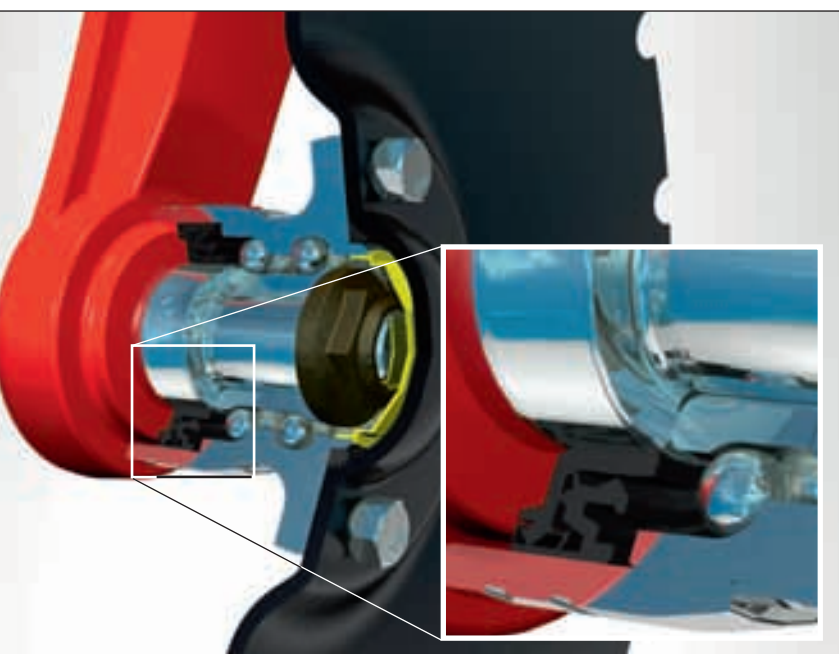
Crossboard levels plough furrows

Crossboard consists of a number of spring tines of specialist steel, which aggressively crush coarse plough furrows. At the lower end of the Crossboard tine there is an angled wearing plate that can easily be replaced if required. The angle of attack of Crossboard can be hydraulically controlled on the go from the driving seat. During work in stubble, Crossboard can be folded up completely.



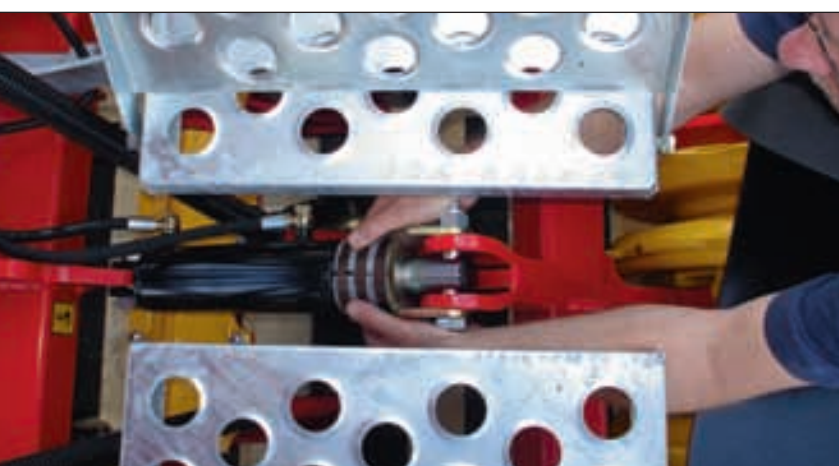
Powerful cultivation

Carrier Drill has the same soil cultivating ability as Carrier. Two rows of conical discs give rise to very intensive cultivation and mixing of the upper 2 - 10 cm. Because of the more compact 450 mm disc diameter, a very high rotational speed can be achieved, which means more intensive mixing and leaves a very level soil surface with a fine structure after the machine.



Long life

The notched discs of hardened, specialist V-55 steel penetrate the soil aggressively at high speed and take small 'bites' of soil, which are thrown to the side. The permanently lubricated disc bearings are fully protected by specialist seals. The sealing cassette has a multiple sealing function that efficiently excludes dust and moisture.



Simple depth setting

Setting the cultivation depth for Carrier Drill is simple. The roller controls the entire machine and the depth can be set hydraulically from the tractor cab. Maximum cultivation depth is set using clips on the cylinder.

Large seed hopper

Carrier Drill has a generously proportioned seed hopper of 1100 litres, which gives approx. 4-6 ha of drilling per refill. The hopper is situated close to the tractor to minimise the lift requirement. The sturdy platform makes for easy filling and inspection.

(A) A stirrer axle is positioned above the seed rollers in the hopper to ensure uniform seed metering.



Tried and tested metering

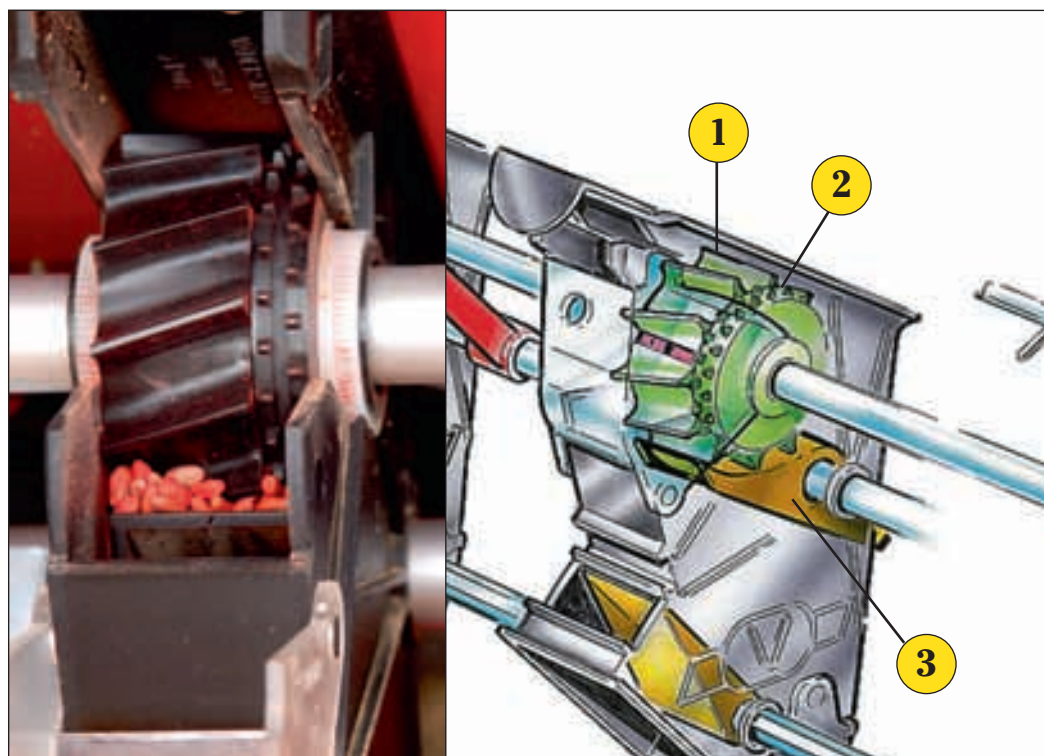
The metering system is identical to the tried and tested system found on Rapid 300/400S. A large drivewheel follows the soil surface and powers a gearbox. This gearbox can be steplessly adjusted for all relevant rates from 2 - 300 kg/ha. Exact metering is essential for uniform emergence and also provides the scope for lower seed rates.



Exact metering

Carrier Drill is capable of drilling seeds of all sizes from tiny rape-seed to beans. Metering takes place with the help of (1) oblique ridges on the seed roller that continuously meter out the required amounts. For drilling of small-seeded crops and oilseeds the metering system is converted so that metering is carried out by a (2) fine seed roller that gives very good precision at low seed rates.

To avoid damage to the metering system, each bottom flap (3) is spring-mounted.





Seed nozzles disperse seed

The seed is broadcast in a band in the wake of each disc and is covered by the stream of soil from the neighbouring disc. The new seed nozzle on the 2009 model is made completely from steel, for improved durability. The nozzle has a very long life since it does not penetrate into the soil and if hit by e.g. a stone, it is easy to replace.



Consolidation and surface loosening

An optimal degree of consolidation involves good contact between seed and soil in order to supply the seed with water. Väderstad Carrier Drill has a weight of 850 kg/m working width, which leads to good penetration and good contact between seed and soil. This weight is particularly important in dry and hard conditions, where a light machine simply scrapes the surface.

The roller is 600 mm in diameter and consists of either a rubber body or steel rings. The steel roller is the best option when more aggressive consolidation is required, for example on heavy soil. The steel roller has a good ability to run cleanly, even in wet conditions. On lighter soils the rubber roller is a good option since it has very low inertia and the risk of soil dragging is practically eliminated.

The following harrow, which is spring-mounted and easily adjustable, leaves a loose surface layer.



Scrapers

The ingenious and responsive scrapers are suspended from their mountings, which means that the roller is kept clean even in tough and difficult conditions. An adjustable arm with equally adjustable wearing parts designed to follow the contours of the rings efficiently clear away any soil or plant trash.



Fast and versatile

Speed is the winning card for Carrier Drill, at least according to Vincent Guyot in France. In addition to drilling cereals, oilseeds and beans with his Carrier Drill, Vincent is also planning to incorporate fertiliser with it during stubble cultivation in order to save passes and reduce costs.

Vincent Guyot in France invested in a trailed Carrier Drill 300 in 2007 and is very pleased with it. Of the 125 hectares on the farm, 20 hectares are sugarbeet. However, on the remaining 105 hectares he drills winter rape, winter wheat, spring barley and field beans with his Carrier Drill every year. He also cultivates stubble and establishes his mustard and oil radish catch crops with Carrier Drill. So in total, the machine works over 200 hectares per year.

Fertiliser too

However Carrier Drill's versatility will be encouraged to blossom even further in the future. 'I intend to incorporate mineral fertiliser with Carrier Drill during the first stubble cultivation to decrease the total number of passes', explains Vincent Guyot. He points out that it is important for Carrier Drill to be able to work on well-levelled fields. On his farm he uses a subsoiler with integral packer for this purpose.

Speed the winning card

He believes that the absolutely greatest advantage with Carrier Drill is the speed and therefore the work rate. 'I can easily stubble-cultivate at speeds of over 15 km/hour', he says. This year Vincent Guyot drilled his winter wheat at the same speed, without any problems. His conclusion is simple: 'The faster this machine works, the better the work it does.'

Incorporation positive



Vincent Guyot plans to incorporate mineral fertiliser for his crops during the first stubble cultivation with Carrier Drill. That is one way of reducing the number of individual fertiliser applications and uses Carrier Drill even more efficiently. Other farmers have successfully tested this method. In this case the seed hopper is used as a fertiliser container and the mineral fertiliser is buried deeper (6 - 10 cm) than the planned seed depth. It is important for the fertiliser to be placed deeper in order to avoid contact with the seed, since this can cause salt damage to the germinating seed. Nutrient utilisation is improved when fertiliser is incorporated into the soil. However despite this, deep incorporation does not give the same degree of effect as e.g. row incorporation with Rapid, where the fertiliser is placed at an exact distance beside and below the seed row.



A safe investment

Investing in a Väderstad Carrier Drill means acquiring a very reliable and flexible tillage partner.

Few moving parts and a robust construction mean that Carrier Drill has low running costs. Väderstad Carrier Drill is in demand on the second-hand market and has a high resale value.

Close to service

Väderstad is represented in around 30 countries and we have an experienced network of subsidiaries, importers and dealers. Highly-trained service engineers with many years of product expertise guarantee you top-class service.

Keep your machine a Väderstad machine

Our distribution network contains well-stocked spare parts depots close at hand for quick support, and deliveries are made using the leading logistics experts on the market. We retain spare parts for all our machines, which gives you security during the life of your machine.

All our spare parts books are always available and updated on the internet (www.vaderstad.com) for fast and easy identification of the part you require. By always fitting Väderstad quality parts, you ensure problem-free operation and maintain the value of your machine.



Your farm profits – our driving force

Our driving force is to create flexible machines for soil tillage and drilling that do an excellent job regardless of the cropping system used. All our machines perform several operations in a single pass and have a high capacity for work – all of which saves time, energy and money. The long life and high second-hand value of our machines make them very cost-effective and keep machinery

costs low. Our concept of fewer passes and shallower cultivation promotes good soil structure and the presence of earthworms – something that is completely central in maintaining and increasing the fertility and yield potential of arable soil.

Väderstad has been supplying high quality machinery and methods to farmers world-wide since 1962. Väderstad is a Swedish, family-owned company that is represented in over 30 countries around the world.

www.vaderstad.com



- Head office
- Seed Hawk
- Subsidiary
- Importer





Rapid C/S

Mechanical, with or without Combi. The Rapid seed drill is a flexible universal implement for drilling in different conditions – ploughed, ploughless or direct-drilled.

RD 300, 400C/S



Rapid RDAS

Pneumatic, available in 4, 6 and 8 m working widths. Very high drilling capacity combined with exceptional soil cultivating capacity. Despite its impressive dimensions, the machine is responsive on headlands and in transport.

RDA 400, 600, 800S



Rapid RDAC/J

Pneumatic, available as Combi in 6 and 8 m. Very high drilling capacity combined with exceptional soil cultivating capacity. Despite its impressive dimensions, the machine is responsive on headlands and in transport. Rapid Jumbo has the same hopper, but only for seed.

RDA 600, 800C

RDA 600, 800J



Carrier 420 - 1225

Carrier is a very versatile soil cultivating implement that is suitable for both ploughless and ploughed cultivation systems. Rubber roller available as option. Crossboard available as option for 420, 500 and 650.

CR 420, 500, 650, 820, 1225

CR CB 420, 500, 650



Carrier 300 - 400 (mounted or trailed)

Same versatility as the larger Carrier machine. Excellent for medium-sized farms with demands on capacity and quality in soil tillage.

CR 300, 350 400



Cultus 420 - 620

Powerful cultivator with a range of different options depending on soil texture, for example rubber roller for light soils, steel roller for heavy soils. Tine spacing 20 cm.

CS 420, 500, 620



NZ Aggressive

Powerful cultivator with a work outcome characterised by well-tilled soil, level seedbed base and fine seedbed.

NZA 500, 600, 700, 800, 900, 1000



NZ Mini (mounted)

Does the same job as the larger NZ Aggressive. Work outcome characterised by well-tilled soil, level seedbed base and fine seedbed.

The machine is mounted on the three-point linkage.

NZM 400, 500



Rexius

Rexius is a cultivating roller with high ability, an excellent soil cultivator. In widths 5 and 6.5 m it is an excellent following implement for cultivators or harrows where there are extra high demands for reconsolidation.

RS 500, 650, 820, 940, 1020, 1230



Spirit

Spirit combines full cultivating ability and impressive seed placement even at high speeds. Spirit is designed for light soils. ST 400, 600, 800, 900



Carrier Drill (mounted or trailed)

The renowned soil tillage ability of Carrier combined with a grass-box in the same machine. A very cost-effective option in good growing conditions. The trailed model has a rubber roller, with Crossboard as option. CRD 300



Seed Hawk 400 - 800C

Väderstad Seed Hawk is a flexible and robust seed drill, primarily designed for direct drilling. Has 25 cm row spacing and superb seed placement ability. SH 400, 600, 800C



Cultus 300 - 350 (mounted or trailed)

The same versatility as the larger Cultus machine. Excellent for medium-sized farms with demands on capacity and quality in soil tillage. Triple-axled, with 30 cm tine spacing. CS 300, 350



TopDown

The most flexible solution on the market for shallow to deep cultivation in one machine. TD 300, 400, 500, 600, 700, 900



BioDrill

BioDrill is a flexible seed drill for small-seeded crops with a hopper capacity of 360 litres. BioDrill can be mounted on Rollex, Rexius, Carrier and Rapid RDA.



Rollex

The Rollex ring roller after drilling ensures good contact between soil and seed. It also decreases the risk of stones entering the combine. RX 620



Seed Hawk 1225 - 2500

Outside Europe, Seed Hawk is available in giant formats from 12 to 25 m (transport width 5,7 - 8,5 m). Seed Hawk is primarily designed for direct drilling, with 25 cm row spacing and superb seed placement. SH 1225, 1830, 2500



Rexius Twin

Rexius Twin is a true heavy-weight, with a weight of around 1500 kg per metre working width. Rexius Twin subdues heavy plough furrows that no other implement can handle. RST 450, 550, 630, 830

Model	Hydraulically carried		Trailed
	CRD 300S	CRD 300S	CRD 300S
Draught requirement (hp)	120 - 150	120 - 150	120 - 150
Working width (m)	3,0	3,0	3,0
Transport width (m)	3,0	3,0	3,0
Seed hopper (L)	1100	1100	1100
Weight (kg) (basic machine)	2150	2000	2200
Drawbar	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Crossboard (only in combination with drawbar)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rubber roller		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Steel roller	<input checked="" type="checkbox"/>		
Following harrow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Following harrow + Control-Station Bio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Following harrow + Control-Station Bio + markers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydraulic outlets	1 DA	1 DA	1 DA

= Options

= Standard

DA = Double action

All versions of Carrier Drill have an area meter.



Adapted to your needs

Based on your requests, Carrier Drill can be equipped with following harrow, marker arms, Crossboard, drawbar and Control-Station Bio for controlling the hydraulics and monitoring the sensors. No two farms are the same and therefore Carrier Drill can be adapted to your specific needs!



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